

## Diode especially p-n, Schottky or combination diode

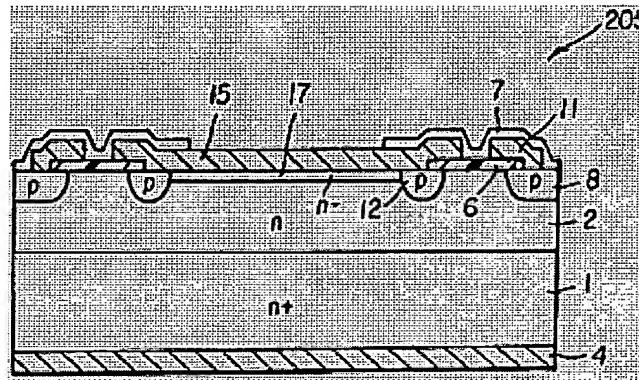
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**Abstract of DE19824514**

A diode has (a) a first conductivity type first zone (1) bearing a first conductivity type second zone (2) of lower defect concentration; (b) an annular second conductivity type third zone (12) formed in a surface layer of the second zone (2); (c) a second conductivity type fourth zone (3a) formed in a second zone surface layer region within the third zone (12); and (d) respective main electrodes (4, 5) in contact with the first and fourth zones (1, 3a). The lowest resistance section of the fourth zone (3a) has a resistivity of at least 1/100 (preferably 0.3-30) times that of the second zone (2) and the depth of the fourth zone (3a) is less than that of the third zone (12), the fourth zone depth preferably being 0.01-0.5  $\mu$ m. Also claimed are similar diodes and processes for producing the diodes.



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